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Translation of Abstract of Rogier Reference (EP 1043658)

A process for improving the performance of a multiprocessor system comprising a job queue and a system architecture for implementation of the process.

The invention is concerned with a process for the allocation of tasks in a multiprocessor system for processing numerical data with a preemptive operating system and an architecture for implementation of this process. The system comprising processors (200-203 and 210-213) capable of processing tasks in parallel, distributed in groups (200-201, 202-203). An elementary queue (5_a, 5_b) is associated with each of the groups of processors (200-201, 202-203) and records tasks to be performed. All the tasks to be performed (T_1 to T_{10}) are recorded in a table (4). Each of the tasks (T_1 to T_{10}) in the table (4) is associated with one of the queues (5_a, 5_b), and each of the tasks recorded in the queues (5_a, 5_b) is associated with one of the processors (200 to 201). The associations are made by sets of crossed pointers (p_{200} to p_{203}, $pp5_a$, $pp5_b$, pT_1, pT_5, pT_{10}, p_{5a1}, to p_{5a4}, p_{5b1} to p_{5b10}). In a further embodiment, in accordance with a number of variants, a (re)-balancing of the load of the system is carried out between elementary queues.